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SURVEY ARTICLE

Literature Survey on Applications of Digital Signal Processing using Anti-Aliasing and Anti-Imaging Filters

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Abstract

The polynomial-based interpolation is that it can be efficiently implemented using the so called Farrow structure. This discrete-time filter structure consists of Finite Impulse Response (FIR) branch filters having fixed coefficient values. The interpolated samples are obtained by weighting the output samples of these FIR filters by the fractional interval m . In this paper, a new method for designing polynomial based interpolation filters has been proposed in this method is based on the relationship between the Taylor series of the approximating continuous-time signal and the Farrow structure as introduced. It enables us to design the FIR filters in the Farrow structure separately. Because these FIR filter are linear-phase filters, they can be easily designed by using the Remez algorithm.

Keywords: *Anti-aliasing, Anti-imaging, linear-phase filters, Remez algorithm*

Full Text: <http://www.ijcsmc.com/docs/papers/February2014/V3I2201434.pdf>